UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,092	02/17/2005	Otso Auterinen	59643.00568	6771

32294   7590   12/10/2008
SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER
ELPENORD, CANDAL

ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
12/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/519,092	AUTERINEN, OTSO
	Examiner	**Art Unit**
	CANDAL ELPENORD	2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 September 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

    4a) Of the above claim(s) <u>2,3,5-9,12,13,16,18,19,24 and 25</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,4,10-15,17,20,21,23 and 26-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on <u>December 12, 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

September 18, 2008 has been entered.

Claim Objections

2.   **Claims 31, 35** are objected to because of the following informalities: The claim

dependency seems to refer back to the apparatus claim of 44 when the claim is directed

toward a method. Appropriate correction is required.

Similarly problem exists for claim 35.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   **Claims 23, 43** are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Regarding claims 23, 43, the limitation "a computer program embodied on a

computer readable medium" recited in lines 1-2 is not described in the original filed

application, thus "new matter".

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   **Claims 20, 26, 42-44** are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Regarding claim 20, the limitation "receiving negotiation determined at a

resource node from the resource node" recited in lines 3-4 is vague and indefinite

because the limitation is unclear.

Similar problems exist for claims 42-44.

Claim 26 is rejected due to its dependency on claim 20.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   **Claims 1, 4, 10-11, 14, 17, 20-21, 23, 26-29, 33, 35-37, 39, 41** are rejected

under 35 U.S.C. 102(b) as being anticipated by Kari et al (WO 97/26739).

Regarding claim 1, Kari '739 discloses a system (fig. 1, see packet radio

system for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9),

comprising: user equipment (fig. 1, see Mobile Station communicatively coupled to the

base station transceiver); a resource node (fig. 1, see Base Station Transceiver in

combination with SGSN node coupled to the base station controller and the mobile

station (i.e. user equipment) with means for controlling packet data service, page 6,

lines 2-20) configured to manage resource for communication with said user equipment

(fig. 1, see Mobile Station communicatively coupled to the base station transceiver,

page 6, lines 10-20); and a managing node configured to manage traffic flow (fig. 1, see

GGSN gateway node for routing mobile data packets, page 7, lines 33 to page 8, lines

5), wherein said resource node and said managing node are configured so that

negotiation information (noted: exchanged of information during connection set up/call

set up between the support nodes and the billing center, page 9, lines 9 to page 10,

lines 19) the where the information comprises of charging determined by the at least

one resource node is passed between the resource node and the managing node (noted: the SGSN and the GGSN RPRS nodes collect information with respect to charging/billing, data usage, page 8, lines 6-17, page 9, lines 9 to page 10, lines 19- SGSN node sending charging information to the billing BGGSN), said managing node selecting a parameter for a new traffic flow based on said negotiation information (noted: determined traffic fees based on the data amount of the traffic flow, service type, page 8, lines 6-22), wherein said negotiation information comprises cost (noted: data packet with charging information, service type, data amount, page 9, lines 8-35).

Regarding claim 4, Kari '739 discloses a system (fig. 1, see packet radio system for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein said negotiation information further comprises at least one of type of traffics, and the bit rate of the traffic (noted: charging based on the data amount, service type, service quality, page 8, lines 6-20).

Regarding claim 10, Kari '739 discloses a system (fig. 1, see packet radio system for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein said managing node is located at an edge of a network (fig. 1, see GGSN gateway node situated at the edge of the network).

Regarding claim 11, Kari '739 discloses a system (fig. 1, see packet radio system for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein said managing node comprises a gateway general packet radio service support node

(fig. 1, see GGSN gateway node for routing mobile data packets, page 7, lines 33 to
page 8, lines 5).

Regarding claim 14, Kari '739 discloses a system (fig. 1, see packet radio
system for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein
the managing node further provides detecting a new flow and wherein communication
between the managing node and resource node (noted: exchanged of information
during connection set up between the support nodes and the billing center, page 9,
lines 9 to page 10, lines 19) is via a general packet radio service tunneling protocol
(noted: see communication and charging based on communication protocol between
the support nodes, elements in the GPRS, page 9, lines 4 to page 10, lines 2).

Regarding claim 17, Kari '739 discloses a method (noted: method for generate
charging in data packet service network, page 3, lines 10-35), comprising: determining
negotiation information (noted: determined traffic fees based on the data amount of the
traffic flow, service type, page 8, lines 6-22) at a resource node (noted: exchange of
information during connection set up/call set up between the support nodes and the
billing center, page 9, lines 9 to page 10, lines 19), the negotiation information
comprising cost (noted: data packet with charging information, service type, data
amount, page 9, lines 8-35); and passing the determined negotiation information
between the resource node and a managing node (noted: the SGSN and the GGSN
GPRS nodes collect information with respect to charging/billing, data usage, page 8,

lines 6-17, page 9, lines 9 to page 10, lines 19-SGSN node sending charging

information to the billing BGGSN).

Regarding claim 20, Kari '739 discloses an apparatus (fig. 1, see packet radio

system with combined network elements of SGSG, GGSN, BSGGSN for generating

billing, page, 3, lines 10-25, page 5 to page 7, lines 9), comprising: a traffic flow

manager configured to manage a traffic flow (fig. 1, see Base Station Transceiver in

combination with SGSN, GGSN nodes coupled to the base station controller and the

mobile station (i.e. user equipment) with means for controlling packet data service, page

6, lines 2-20) configured to manage resource for communication with said user

equipment (fig. 1, see Mobile Station communicatively coupled to the base station

transceiver, page 6, lines 10-20); an information receiver (fig. 1, BSGGSN node)

configured to receive <u>negotiation </u>information (noted: the SGSN and the GGSN GPRS

nodes collect information with respect to charging/billing, data usage, page 8, lines 6-

17, page 9, lines 9 to page 10, lines 19-SGSN node sending charging information to the

billing BGGSN) determined at a resource node from the resource node (fig. 1, see the

billing gateway support receiving billing information collected by the SGSN and GGSN

nodes respectively, page 4, lines 3-20) <u>the negotiation information comprising cost</u>

(noted: data packet with charging information, service type, data amount, page 9, lines

8-35)<u>;</u> and a selector configured to select at least one parameter for a new traffic flow

based on said <u>negotiation </u>information (noted: determined traffic fees based on the data

amount of the traffic flow, service type, page 8, lines 6-22).

Regarding claim 21, Kari '739 discloses an apparatus (fig. 1, see packet radio system with combined network elements of SGSG, GGSN, BSGGSN for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), comprising: a resource manager (fig. 1, see Base Station Transceiver in combination with SGSN node coupled to the base station controller and the mobile station (i.e. user equipment) with means for controlling packet data service, page 6, lines 2-20) configured to communicate with user equipment (fig. 1, see Mobile Station communicatively coupled to the base station transceiver, page 6, lines 10-20); and an information determiner configure to determine negotiation information (noted: the SGSN and the GGSN RPRS nodes collect information with respect to charging/billing, data usage, page 8, lines 6-17, page 9, lines 9 to page 10, lines 19-SGSN node sending charging information to the billing BGGSN): the negotiation information comprising cost (noted: data packet with charging information, service type, data amount, page 9, lines 8-35); information passer configured to pass said negotiation information to a managing node (noted: the SGSN and the GGSN GPRS nodes collect information with respect to charging/billing, data usage, page 8, lines 6-17, page 9, lines 9 to page 10, lines 19-SGSN node sending charging information to the billing BGGSN).

Regarding claim 23, Kari '739 discloses a computer program embodied on a computer readable medium (fig. 1, the gateway node used for storing information of GPRS mobile stations that used for charging the user during roaming, page 7, lines 33 to page 8, lines 26), said computer program configured to control a processor to

perform (fig. 1, see Base Station Transceiver in combination with SGSN node coupled

to the base station controller and the mobile station (i.e. user equipment) with means for

controlling packet data service, page 6, lines 2-20): determining negotiation information

(noted: determined traffic fees based on the data amount of the traffic flow, service type,

page 8, lines 6-22) at a resource node (fig. 1, SGSN node, noted: exchange of

information during connection set up/call set up between the support nodes and the

billing center, page 9, lines 9 to page 10, lines 19), the negotiation information

comprising cost (noted: data packet with charging information, service type, data

amount, page 9, lines 8-35); and passing the determined negotiation information

between the resource node and a managing node(noted: the SGSN and the GGSN

GPRS nodes collect information with respect to charging/billing, data usage, page 8,

lines 6-17, page 9, lines 9 to page 10, lines 19-SGSN node sending charging

information to the billing BGGSN).

Regarding claim 26, Kari '739 discloses an apparatus (fig. 1, see packet radio

system with combined network elements of SGSG, GGSN, BSGGSN for generating

billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein said parameter is at

least one of the following, traffic handling class, cost (noted: charging based on the data

amount, service type, service quality, page 8, lines 6-20).

Regarding claim 27, Kari '739 discloses an apparatus (fig. 1, see packet radio

system with combined network elements of SGSG, GGSN, BSGGSN for generating

billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein the apparatus

comprises an access node (fig. 1, see Base station transceiver) which is configured to

communicate with user equipment (fig. 1, see the mobile station communicative coupled to the base station transceiver).

Regarding claim 28, Kari '739 discloses an apparatus (fig. 1, see packet radio system with combined network elements of SGSG, GGSN, BSGGSN for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein the access node is a base station (fig. 1, see BTS providing packet data services to the mobile station based on charging per usage at the interface).

Regarding claim 29, Kari '739 discloses an apparatus (fig. 1, see packet radio system with combined network elements of SGSG, GGSN, BSGGSN for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9), wherein said node apparatus is comprised in an access node (fig. 1, see the combination of the base station transceiver, base station controller, switching center)..

Regarding claim 33, Kari '739 discloses a method, wherein said negotiation information is determined for a plurality of different traffic handling classes (noted: charging based on the data amount, service type, service quality, page 8, lines 6-20).

Regarding claim 35, Kari '739 discloses a method, wherein said apparatus (fig. 1, see packet radio system with combined network elements of SGSG, GGSN, BSGGSN for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9) is comprised in a managing node located at an edge of a network (fig. 1, see GGSN

gateway node situated at the edge of the network).

Regarding claim 36, Kari '739 discloses a method, wherein said apparatus

(fig. 1, see packet radio system with combined network elements of SGSG, GGSN,

BSGGSN for generating billing, page, 3, lines 10-25, page 5 to page 7, lines 9) is

comprised in a managing node comprising a gateway general packet radio service

support node (fig. 1, see GGSN gateway node situated at the edge of the network).

Regarding claim 37, Kari '739 discloses a method, wherein said resource node

is an access node (fig. 1, Base Station Transceiver in combination the billing BGGSN

node for determining the charge based on the usage of the radio interface, abstract,

lines 1-8, page13, lines 26-31, page 10).

Regarding claim 39, Kari '739 discloses a method, wherein the managing node

further provides detecting a new flow (noted: determined traffic fees based on the data

amount of the traffic flow, service type, page 8, lines 6-22).

Regarding claim 41, Kari '739 discloses a method, wherein communication

(noted: exchanged of information during connection set up between the support nodes

and the billing center, page 9, lines 9 to page 10, lines 19) between the managing node

and resource node is via a general packet radio service tunneling protocol (noted: see

communication and charging based on communication protocol between the support

nodes, elements in the GPRS, page 9, lines 4 to page 10, lines 2).

9.   **Claims 31-32, 34, 42-44** are rejected under 35 U.S.C. 102(e) as being

anticipated by Oyama et al (US 2002/0068545 A1).

Regarding claim 42, Oyama '545 discloses a method (see, mechanism of

correlating charging for a multimedia session, paragraph 0070) comprising: managing a

traffic flow (see resource manager in combination with base station manager (i.e. for IP

service) for distributing resources (i.e. controlling or managing) for individual service,

paragraph 0039); receiving negotiation information (noted: receiving of charging

information, paragraph0134) determined at a resource node from the resource node

(noted: negotiated QoS profiles between the nodes (i.e. SGSG, GGSN nodes),

paragraph 0046, 0049, noted: agreement between the network elements such as

GGSG, SGSG, and the mobile terminal with respect to charging, paragraph 0135)

wherein the negotiation information comprises cost (noted: charging information related

to multimedia services, paragraphs 0071); and selecting at least two parameter for a

new traffic flow (noted: initiation of multimedia flow by the mobile station, paragraphs

0114, 0116) based on said negotiation information (noted: the volume of packets sent,

quality of service parameters based on charging information, paragraphs 0116, 0130).

Regarding claim 34, Oyama '545 discloses a method (see, mechanism of

correlating charging for a multimedia session, paragraph 0070), wherein said parameter

is at least one of the following, traffic handling class (see, plurality of traffic handling

classes such as delay sensitive, background class, delay insensitive, paragraphs 0042),

cost (noted: charging based on flow, paragraphs 0045, 0068-0069), and target bit rate

(charging per unit of data, paragraph 0067, see the number of packets sent, paragraph

0116).

      Regarding claim 43, Oyama '545 discloses a computer program embodied on a

computer readable medium (noted: software embedded within hardware circuit for

implanting the method for generating charges for multimedia sessions, paragraphs

0110, see, mechanism of correlating charging for a multimedia session, paragraph

0070), said computer program (noted: software embedded within hardware circuit for

implanting the method for generating charges for multimedia sessions, paragraphs

0110) configured to control a processor (see, programmed digital microprocessor,

paragraph 0110) to perform: managing a traffic flow (see resource manager in

combination with base station manager (i.e. for IP service) for distributing resources (i.e.

controlling or managing) for individual service, paragraph 0039); receiving negotiation

information (noted: receiving of charging information with respect to multimedia session

setup, call set up, paragraph0134) determined at a resource node from the resource

node (noted: negotiated QoS profiles between the nodes (i.e. SGSG, GGSN nodes,

mobile station) in order to establish connection/multimedia session set up, paragraph

0046, 0049, noted: agreement between the network elements such as GGSG, SGSG,

and the mobile terminal with respect to charging, paragraph 0135), wherein the

negotiation information comprises cost (noted: charging information related to

multimedia services, paragraphs 0071); and selecting at least two parameter for a new

traffic flow (noted: initiation of multimedia flow by the mobile station, paragraphs 0114,

0116) based on said negotiation information (noted: the volume of packets sent, quality

of service parameters based on charging information, paragraphs 0116, 0130).

Regarding claim 44, Oyama '545 discloses an apparatus (fig. 6, see GPRS

network with set of network elements (i.e. GGSN, SGSN nodes), paragraphs 0022),

comprising: managing means (noted: QoS management for managing negotiated QoS

attributed, paragraphs 0030, 0034) for managing a traffic flow (see resource manager in

combination with base station manager (i.e. for IP service) for distributing resources (i.e.

controlling or managing) for individual service, paragraph 0039); information receiving

means for receiving negotiation information (noted: receiving of charging information,

paragraph0134) determined at a resource node from the resource node (noted:

negotiated QoS profiles between the nodes (i.e. SGSG, GGSN nodes), paragraphs

0046, 0049, 0023, noted: agreement between the network elements such as GGSG,

SGSG, and the mobile terminal with respect to charging, paragraph 0135), wherein the

negotiation information comprises cost (noted: charging information related to

multimedia services, paragraphs 0071); and selecting means for selecting at least two

parameter for a new traffic flow (noted: initiation of multimedia flow by the mobile

station, paragraphs 0114, 0116) based on said negotiation information (noted: charging

information based on volume of packets sent, quality of service parameters, paragraphs

0116, 0130).

Regarding claim 31, Oyama '545 discloses a method (see, mechanism of

correlating charging for a multimedia session, paragraph 0070), further comprising

negotiating in order to select the at least one parameter (noted: charging information

based on volume of packets sent, quality of service parameters, paragraphs 0116,

0130).

Regarding claim 32, Oyama '545 discloses a method, wherein the negotiation

information (noted: negotiated QoS profiles between the nodes (i.e. SGSG, GGSN

nodes), paragraph 0046, 0049, noted: agreement between the network elements such

as GGSG, SGSG, and the mobile terminal with respect to charging, paragraph 0135)

further comprises at least one of type of traffic (see, plurality of traffic handling classes

such as delay sensitive, background class, delay insensitive, paragraphs 0042), cost

(noted: charging based on flow, paragraphs 0045, 0068-0069) and bit rate of the traffic

(charging per unit of data, paragraph 0067, see the number of packets sent, paragraph

0116).

10.   **Claim 15, 30, 38, 40** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kari et al (US WO 97/26739) in view of Arunachalam et al (US 6,631,122 B1).

Kari '739 discloses the system with resource node as discussed in above with

the exception of being silent with respect to claimed features: **Regarding claims 15, 30,**

40, wherein the resource node further provides balancing a load between available

resources.

Regarding claim 38, a method, wherein the managing node further provides

guiding an actual flow rate to a target flow rate.

However, Arunachalam '122 from the same field discloses the above claimed features:

Regarding claim 15, wherein the resource node (fig. 3, QoS Agent 301, "QoS Agent guiding the Radio Resource Manager in allocating radio channels", recited in col. 4, lines 67 - col. 5, lines 16, "the resource manager determines the set of resources to be provided", recited in col. 9, lines 30-35)) further provides balancing a load between available resources (see, the QoS agent providing load balancing, col. 4, lines 23-33).

In view of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching features of Kari '739 by using the teaching features of Arunachalam '122 in order to provide load balancing of flow based on QoS as suggested in col. 4, lines 37-47 for motivation.

Regarding claims 30, 40 , please see the Examiner comments with respect to claim 15 as discussed above.

Regarding claim 38, a method, wherein the managing node further provides guiding an actual flow rate to a target flow rate (("mapping of a packet of new flow to the class of services (COS)", recited in col. 7, lines 60 - col. 8, lines 6, "various classes of wireless services with specified QoS requirements", recited in col. 5, lines 26-29).

In view of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching features of Kari '739 by using the teaching features of Arunachalam '122 in order to provide load balancing of flow based on QoS as suggested in col. 4, lines 37-47 for motivation.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Li et al (US 6,728,365 B1) and Tanigawa et al (US 6,483,835 B1).

       Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571)270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

       If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

       Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Candal Elpenord/

Examiner, Art Unit 2416

/Kwang B. Yao/

Supervisory Patent Examiner, Art Unit 2416